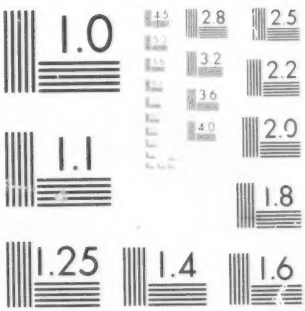

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ABSTRACT

Experimental measures to identify individuals at high risk of drug use can be developed from study data. Negative side effects of identification efforts can be lessened or eliminated by the use of unobstrusive measures in the monitoring process. Regarding heroin use, different measures are suggested to monitor the following variables: academic failure indices, nervousness, parental lax discipline, test anxiety, sociability, poverty, earning money early in life, and hearing difficulties. Different ways of obtaining these measures are discussed. The prevention of alcohol use involves monitoring the following factors: gender, personality, parent-child relationships, academic performance, behavior patterns, financial status, and health. Different measures to use in obtaining these factors are presented. Other uses of the findings are suggested. (Author/CKJ)

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IMPLICATIONS FOR COUNSELING PRACTICE OF THE PUERTO RICAN PSYCHO-SOCIAL PRECURSORS STUDY

Ena Vazquez Nuttall
Unviversity of Massachusetts-Amherst

Ronald L. Nuttall
Boston College

ED165029

This paper contains recommendations for possible variables to examine, test, or monitor in order to prepare programs for the prevention of heavy drug use especially alcohol and heroin. While this study used questions to obtain information from subjects, questionnaires are not the sole medium of monitoring a population of students. When one is trying to prevent drug abuse especially in a school setting where these recommendations would be most applicable, explicit ways of obtaining information are not the best methods. Unobtrusive measures are the ideal because they do not make the students aware that they are being monitored and also it does not influence teachers to give differential treatment to high risk students which can result in a self-fulfilling prophecy. This means that teachers may begin to expect poor performance from a student because of their knowledge of his or her high risk status and indeed make the student perform poorly as a result of their expectation. What we are trying to say is that the manner in which a high risk population is identified is extremely important, perhaps more important than the content of the variables on which the identification is based. Perhaps one should forget totally about identification and gear preventive efforts to all groups. However despite the risk of some negative effects some degree of monitoring needs to be done otherwise youngsters with serious needs will go unserviced.

In the next sections of this paper possible variables to include in a measure to identify high risk individuals, first in regard to heroin and second to alcohol use, will be discussed. However before presenting these materials some notes of caution will be added.

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Generalizability of the findings

This study was conducted in a sample of Puerto Rican young adults living in Puerto Rico. How applicable are these findings to Puerto Ricans living in the states and to American adolescents and young adults? Our findings for the most part do not differ greatly from the findings of retrospective studies conducted in the United States. The contribution of our study is the fact that our measures were obtained prior or at the beginning stages of drug use. Thus we recommend that Puerto Ricans living in Puerto Rico can use our findings with more confidence, while Puerto Ricans living in the states and Americans should use the recommendations included in this section with caution.

Other factors to consider in using these results is the fact that this study has not been replicated. We do not know how selective or particular is the sample that we obtained. The number of heroin users was small, a fact which makes our results for heroin use more unstable.

Suggested Measure for Predicting Heroin Use

Our findings pertaining to heroin use and those of previous investigators point to the fact that the use of hard drugs is more characteristic of low income groups and the male sex than is the use of soft drugs. Thus counselors and human service workers serving low income groups will find these recommendations more useful than those serving high income groups.

We have found the following factors to be important in predicting risk of using heroin:

° Academic failure indices (low achievement)

° Nervousness (not nervous)

° Parental Lax Discipline (parents low on supervision)

° Test Anxiety (not anxious)

° Sociability (reserved not outgoing)

° Poverty (poor)

° Earned money (early age at earning money)

° Rurality (family from rural background)

° Hearing (trouble hearing people talk)

In general academic failure is the most powerful factor in predicting heroin use. It is also one of the easiest factors to monitor unobtrusively. Number of subjects failed, number of grades repeated,and grade point average can be obtained from a school record without interference or the information can be ascertained from the teachers.

However all the other variables found to be important cannot be assessed unobstrusively. Degree of nervousness was found to be an important variable. To obtain the information the students were asked the following question:

"Are you bothered by nervousness?"

_____Yes, often
_____Yes, sometimes
_____No, never

Students who did not admit of being bothered by nervousness had a higher likelihood of getting involved in using heroin. We feel that this denial, impassivity, or repression of feeling is necessary to be involved in a habit that requires injecting a needle in the veins.

Another factor that was found to be an important precursor of heroin use was the degree to which the parents supervise the children. Children who were not given appropriate supervision were more likely to use heroin than children who were given appropriate supervision. The question used to obtain this information was the following:

> "In general did your father know about what you were doing and always keep an eye on what you were doing or do you think he did not pay much attention to the things that you were doing?"
>
> _____ In general he knew what I was doing
> _____ Sometimes he knew what I was doing and sometimes he did not
> _____ He was not paying much attention to what I was doing

Test anxiety was another factor found to be important in predicting heroin use. Students who were heroin users tended to report less test anxiety than students who were not heroin users. It is very likely that a moderate amount of anxiety is needed to be a high achieving student. It is hard to determine whether the lack of anxiety in regard to tests in high risk of heroin use students is brought about by their lack of interest in school and their subsequent academic failure, or whether the lack of anxiety produces poor test results which lead to poor academic performance, or whether both of these factors are caused by a third unknown factor.

In this research we used the Test Anxiety Scale for Children designed by Sarason and his collaborators (1964). Some of the items included in this 32 item scale are presented below:

The answer categories are as follows:

1= Strongly agree	4= Disagree
2= Agree	5= Strongly Disagree
3= Not sure	

---

1. Before taking a scholastic aptitude test, I feel fairly confident that I will do well.
2. Before taking a scholastic aptitude test, I am aware of an uneasy feeling.
3. While taking a scholastic aptitude test, I am aware that my heart is beating faster.
4. I find myself thinking about other things while taking a test.
5. Before taking a scholastic aptitude test, I tend to worry.

Next in our scheme of recommendations is Factor A - Sociability of Cattell and Cattell (1969) High School Personality Questionnaire. The high end of this factor represents the outgoing, warmhearted, easygoing and participating type of person. These outgoing people are at less risk of becoming heroin users. The low end of this scale includes the reserved, detached, critical and cool type of person. It is this reserved type of person who is more likely to use heroin. This instrument is copyrighted and generally the publishers do not allow the use of single scales. We recommend that permission to use this scale be obtained, or that a similar measure of sociability be used.

The degree of poverty of the student is another important factor to consider in regard to possible heroin use. In this study this factor was measured by asking about the number of people that slept with the student in the same room and in the same bed. We found that the greater the number of people that share the same bed the greater the likelihood of heroin use. The question used to ascertain this variable was the following:

"How many people sleep in the same bed as you do?"

_____1) No one else sleeps in my bed
_____2) One other person sleeps in my bed
_____3) Two other persons sleep in my bed
_____4) Three or more other persons sleep in my bed
_____5) I have no bed and sleep on the floor with others nearby

This question could be touchy to use in a questionnaire. However other unobtrusive measures of finding out the socio-economic level of a person are available in the school records, can be obtained through observations, or from the teachers. Information such as level of education of the parents or type of job can be used as an indicator of socio-economic status.

Children who earned money early were more likely to use drugs than those who did not. This item is probably more meaningful for Puerto Rican culture where earning money young is not as possible or as rewarded as in American culture. Because of the serious adult unemployment problem there are not as many jobs for teenagers there as there are in the United States. Thus a youngster has to be in real need to apply for a job. The question used in this study to obtain this information was the following:

"How old were you when you first started earning money? Do not count money earned for doing chores around your house.

____1) I have not done this
____2) 10 years or younger
____3) 11
____4) 12
____5) 13
_____6) 14 years old
_____7) 15
_____8) 16
_____9) 17 or older

Children whose parents came from rural areas tended to use heroin more than children whose parents came from urban areas. To obtain this information the following question was used:

"In what type of community did your father spend the major part of his childhood (until he was 13)?

_____1) In the country
_____2) In a small town (fewer than 10,000 people)
_____3) In a large town (10,000 to 50,000 people)
_____4) In a city (50,000 to 150,000 people)
_____5) In the metropolitan area
_____6) In another country. Please indicate: _____
_____7) Do not know

This question had specific examples appropriate for use in Puerto Rico and is presented in page 175 of the appendix.

The last factor we will like to recommend pertains to the physical health of the individual and is the degree to which the person is hard of hearing. People who had difficulty hearing people talk tended to use heroin more than those who did not have any trouble. The question used to

obtain this information in this study was the following:

"Do you have trouble hearing people talk?

_____1) Yes _____2) No

Using the above suggestions it should be possible for a school or other concerned organization to develop a short instrument or procedure which would require somewhat less than an hour, probably on the order of 20 minutes, which would give an indication of which students are at greatest risk of later using heroin.

However, it must be stressed that heroin usage is a very rare phenomena. And that very few of the students who score at the very top of such an instrument would in fact become heroin users. It is just that they would run a somewhat greater risk than students who score near the bottom of such an instrument. In particular the danger of labelling a high risk student, with so many who under normal circumstances would not develop a heroin usage pattern anyway, may be a greater risk. Hence, while we recommend that such an instrument be developed and used, it must be used with great caution so that its development and use does more good than harm.

Properly used, such a screening instrument will allow school counselors and community agencies to concentrate their efforts early on those children at most risk. Further, since for heroin, academic failure and lack of oversight by parents are such major factors, school personnel can concentrate their efforts on improving the academic achievement of these failing students and on providing or getting the parents to provide greater oversight. These actions will, if successful, reduce the risk of later heroin usage without labelling the child as anything other than one who needs help in school and in supervision.

Suggested Measure for Identifying Future Alcohol Use

The social norms governing the use of alcohol are very different in Puerto Rico from the United States. In Puerto Rican society drinking alcohol is sanctioned almost overwhelmingly. There are very few groups that have norms against drinking. Drinking is part and parcel of the fabric of daily living. It is linked intimately with being a male and being accepted among other males. Thus the recommendations presented in this section have to be taken in the light of the cultural context from which our sample was obtained.

The difference between the alcohol and heroin user are great. Alcohol users seem to have more coping skills than heroin users. Their psycho-social picture is healthier. In our findings the most important factors leading to drinking behavior were as follows:

°Gender (Being a male)

°Personality (Low on Social Desirability)
(Low on Conscientiousness)
(High on Enthusiasm)

°Parent-child (Father did not know what the child was doing)
(Mother did not know what the child was doing)
(Mother high on lax discipline)
(Mother worked when child was small)

°Academic (Low grades in high school, good grades in elementary)
(Several failures in subjects)
(Somewhat higher achievement test scores)
(Less interest in further studies)

°Behavior (Stays up late on weekends)
(Started smoking early)
(Smoked heavily)
(Number of social clubs)

°Financial (Somewhat higher family financial status)

°Health (No trouble hearing people)
(No prescribed pills or medicines)
(Has used corrective braces or appliances)
(Tends to have indigestion or stomach troubles)
(Has lived in few houses)

One of the most important factors leading to alcohol use is the sex of the person, males having much higher tendencies to alcohol use than females. Thus in setting preventive programs or in identifying persons at risk the male sex is going to be a major target. This variable luckily can be obtained by observation, questionnaire or by unosbtrusively looking into the students file.

A second important factor leading to heavy drinking is the individual's lack of desire or need to present him or herself in a socially desirable way. Social desirability was measured using the Children's Social Desirability Scale (Crandall, Crandall, & Katkovsky,1965). The student is asked to answer true or false to items such as the following:

"____1. I always enjoy myself at a party.
____2. I tell a little lie sometimes.
____3. I never get angry if I have to stop in the middle of something I'm doing to eat dinner, or go to school.
____4. Sometimes I don't like to share my things with my friends
____5. I am always respectful of other people."

A copy of this instrument in full is presented on page 99 of the Appendix.

Enthusiam and conscientiousness were two additional personality dimensions which proved to be highly predictive of alcohol use. Heavy alcohol users tended to be low on conscientiousness, that is, they tended to be expedient, evaded rules, felt few obligations, and had a weak superego. Being high on conscientiousness means to be persevering, staid, rule bound, and to have a strong superego. While not being very conscientious, the heavy alcohol user tends to be enthusiastic. Heavy alcohol users tended to be found more among people whose personality can be described as happy-go-lucky, gay, impulsive, and lively. Information about these two personality dimensions was obtained using Scales G and F of the Cattell and Cattell (1969) High School Personality Questionnaire. Examples of these scales cannot be given

because it is a copyrighted instrument. We recommend that you administer the whole instrument or obtain permission from the publisher to use the two scales mentioned.

The realm of parent-child relationships was an important factor in the prediction of alcohol use. Lack of parental supervision was the most consistent finding in this realm. This information about parent-child relationships was obtained using the following two questions:

> In general did your father know about what you were doing and always keep an eye on what you were doing or do you think he did not pay much attention to the things that you were doing?
>
> _____In general he knew what I was doing
> _____Sometimes he knew what I was doing and sometimes he did not
> _____He was not paying much attention to what I was doing

A similar question but using the term mother in the place of father was used to obtain perceptions about the mother's discipline and style of supervision.

High alcohol users tended to have mothers who worked while the children were young. In order to ascertain the work status of the mother the following question was used:

> Did your mother work at a job outside your home when you were growing up from ages 0 to 5 years?
>
> _____1) Yes, full time
> _____2) Yes, part-time
> _____3) No

In similar fashion to other drug users, high alcohol users tended to do poorly academically. They tended to have low grades in high school, had failed several subjects and were not highly interested in continuing their studies further. However their elementary school grades were not low and their achievement scores were actually higher than those of low

alcohol users. Since academic information is easily available from school records and can thus be obtained unobtrusively , we do not recommend any questions for these variables.

Four types of behavior were highly predictive of heavy alcohol use: staying up late on weekends, starting to smoke early, smoking heavily, and being a member of social clubs. The questions utilized to assess this data are presented below:

How late do you usually stay up on weekends?
___1) 9 P.M. or earlier
___2) 10 P.M.
___3) 11 P.M.
___4) 12 midnight
___5) 1 A.M.

How long have you been smoking?
___1) I do not smoke
___2) Less than 6 months
___3) 6 to 12 months
___4) 1 to 2 years
___5) More tnan 2 years

On the average, about how many cigarettes do you smoke a week?
___1) None
___2) Less than 1/2 a package (less than 10) a week
___3) 1/2 a package to one package (less than 10) a week
___4) 1 to 2 packages (20 tO 40) a week
___5) 2 to 4 packages (40 to 80) a week
___6) 4 to 7 packages (80 to 140) a week
___7) more than 7 packages a week

How many clubs or organizations (other than athletics) have you belonged to in the last 3 years?
__1) None
__2) One club or organization
___3) Two
___4) Three
___5) Four
___6) Five clubs or organizations
___7) Six
___8) Seven
___9) Eight

The next major realm in the prediction of heavy alcohol use were health variables. Among the health variables the most predictive ones were: having no trouble hearing people talk, not having been prescribed pills or medicines, having used corrective braces or appliances, and tending to have indigestion or stomach troubles. The following questions yielded data on these four areas:

Do you have trouble hearing people talk?
_____1) yes _____2) no

For health reasons are you required to do the following?
Take medicine or pills prescribed by a doctor?
____1) yes _____ 2) no

Have you ever worn a shoulder brace, corrective shoes, leg brace, or any other appliance?
____1) yes _____ 2) no

Do you have frequent indigestion or stomach troubles?
_____1) yes _____ 2) no

Family social status as perceived by the student differentiated high from low alcohol users. High alcohol users perceived their family socio-economic status as higher. The question that obtained this information is presented below:

Which of the following best describes your family's finances?
____1) Barely able to make a living
____2) Have the necessities
____3) Comfortable
____4) Well-to-do
____5) Wealthy
____6) Extremely wealthy

Another factor that predicted signficantly alcohol use was the degree to which the family moved. High alcohol users moved less than low alcohol users. The question used to obtain this information is presented below:

> How many different houses or apartments (not counting vacations away from your regular home) has your family lived in during the last three years?
>
> ____1) one ____4) four
> ____2) two ____5) five
> ____3) three ____6) six or more

We estimate that an instrument can be developed for measuring the likelihood of being at risk of later heavy alcohol usage which would require less than one school class period to administer, especially if just the appropriate scales, or substitutes for them from the HSPQ can be used. Since the social stigma in Puerto Rico and in the United States for being a heavy alcohol user is considerably less than for being a heavy heroin user, we are less concerned with the danger of possibly labelling a child with an instrument designed to indicate this risk.

Measures for Identifying Future Usage of Other Substances

In this chapter we have chosen not to present suggestions for the development of instruments and procedures to predict future usage of other substances. We would like to, and think it is important to, develop an instrument for predicting future use of other illegal drugs such as cocaine, amphetamines, barbiturates, and hallucinogens. However the major influence of a history of rheumatic fever in such a prediction instrument gives us pause. We really do not understand theoretically why this result came out and hesitate to make recommendations to the practitioner untill the theoretical basis for this finding is clear.

On the other hand, we are not making recommendations for predicting the usage of marijuana and cigarettes, because we have doubts that the effort of school personnel to make long-range interventions in these behavior patterns would be cost effective. Given the state of the research on the effects of smoking these two substances, and the research on attempts to control their use, we doubt that early detection instruments would be worth the bother. However, if anyone wishes to use our results to create such instruments, the data in available in the previous chapter and in the appendices for the specific items and instruments.